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A New Soil Mite Representing the New Genus
Nemacepheus (Acari : Tectocepheidae)
Found in Mt. Goyô, North Japan

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For examination of soil mites the writer received a soil sample, mostly consisting of the upper layer, which was taken by Dr. Shun-Ichi UÉNO in Mt. Goyô where he made a survey of the subalpine fauna. The soil sample contained numerous oribatid mites, among which a remarkable species of unknown taxonomical position was found. A close examination of this mite has revealed that it should be considered as a member of the family Tectocepheidae, representing a new species and a new genus. The writer is grateful to Dr. UÉNO who offered him a chance to see the interesting material.

Nemacepheus gen. n.

Rostrum with 3 protuberances in dorsal view; lateroventral margins of rostrum provided with many pronounced teeth. Tutorium also toothed at distal end. Lamellae separated from each other, being connected with a translamella. Sensillus long and baciliform, showing equal thickness throughout its length. Dorsal bothridial plate well developed, its posterior extension meeting with notogastral protuberance. Eleven pairs of notogastral setae, of which a pair located near anteromedian border of notogaster. Pedotecta III and IV in touch with each other. Two pairs of anal, 3 pairs of adanal, 1 pair of aggenital, and 6 pairs of genital setae present; g_2 deviated from the line of the remaining setae.

Type-species: *Nemacepheus dentatus* sp. n.

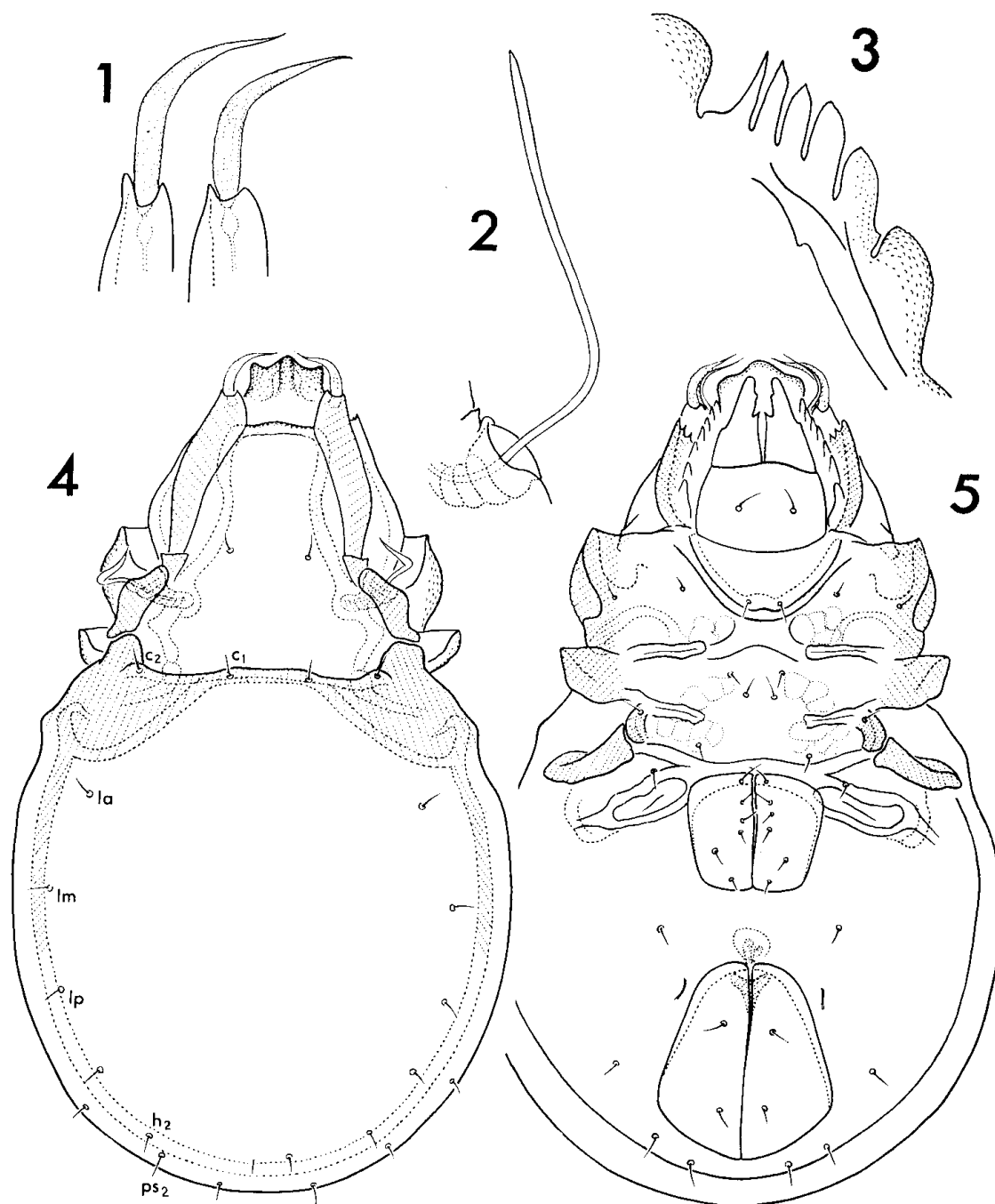
Nemacepheus dentatus AOKI, sp. n.

(Figs. 1–5)

Material examined. Holotype (NSM-AC-P 599): the north slope at the altitude of 900 m of Mt. Goyô, the southeastern part of Iwate Prefecture, Japan; 23-VI-1967; litter sample collected by S. UÉNO and the mite extracted by J. AOKI. Six paratypes: the same data as holotype. The type-series deposited in the National Science Museum, Tokyo.

Measurements: Length: 320–335 μ ; width: 190–205 μ .

Prodorsum. Rostrum in dorsal view with 3 protuberances, a median one and, on each side, an anterolateral one; the part along the dorsomedian line swollen to form



Figs. 1-3. *Nemacepheus dentatus* gen. n. et sp. n. 1. Lamellar cusps with lamellar setae. 2. Sensillus and bothridium. 3. Teeth on the lateroventral margin of rostrum. 4. Dorsal. 5. Ventral.

a longitudinal ridge; a granulate structure covering dorsal surface of rostrum; the lateroventral margin on each side, behind the insertion of rostral seta, has 6 blade-like teeth directed anteroventrad; they become progressively sharper at points from the posterior tooth to the anterior one (Fig. 3). Rostral setae hardly visible in dorsal aspect; the setae strongly curved inward, being distinctly barbed mainly on the proximal halves and sharply pointed at tips. Lamella with a short free cusp, being slightly

sigmoid and terminating in a bifurcate structure; a strong lamellar seta is inserted at the tip of lamella, in the middle of the furcation; the seta minutely roughened on the whole surface, being strongly incurved and suddenly narrowed at tip (Fig. 1). The posterior portion of lamella somewhat narrowed, being connected with a triangular plate, which is in touch with a well developed dorsobothridial plate. Bothridium opening antero-laterad. Sensillus slender baciliform and almost of the same thickness throughout its length; it makes an elbow on the proximal portion (Fig. 2). Outside the lamella, on the lateral part of prodorsum on each side, an elongate ridge (tutorium) is present; the anterior end of it provided with 4 or 5 teeth. Interlamellar seta short and inconspicuous, being located nearly at the middle of smooth surface of prodorsum.

Notogaster. Humeral projections rather conspicuous; their anterior tips meeting the posterior margins of dorsobothridial plates on prodorsum; a small protuberance is found inside the each humeral projection. Because of well chitinized inside structure, the humeral regions look distinctly darker in color than the remaining part of notogaster. Eleven pairs of minute setae arranged submarginally on notogaster; the 4 anteriormost setae (c_1 , c_2 , c_2 and c_1) inserted in a transverse line on the anterior margin, being subequally spaced one another; setae h_1 situated close to each other, their mutual distance being far shorter than that of ps_1 .

Anogenital region. Anal as well as genital aperture large; ratio in length of A:G: A-G (interspace)=8:3:5; adanal seta ad_2 inserted closer to ad_1 than to ad_3 ; adanal fissures aligned longitudinally and discernible as a pair of very narrow slits. On each genital plate, 4 anterior setae arranged near median margin, while posterior 2 on the middle line of the plate or, especially g_2 , closer to lateral margin.

Epimeral region. Apodemata III and IV combined together medially in front of genital aperture; $apo. 4$ formed as an elongate ring with a short peduncle outside; $apo. 1$ and $apo. 2$ connected with a faint bridge-shaped ridge. Epimeral setae $3a$ situated on $ep.2$ and close to $2a$; mutual distance $3a-3a$ distinctly shorter than $2a-2a$.

Pedotecta. $pd.1$ and $pd.2$ normal cup-shaped; their anteroventral edges almost straight; $pd.3$ and $pd.4$ very characteristic; $pd.4$ slightly bent and rather horn-shaped, being widest at the median end; $pd.3$ small and lobe-shaped, hanging from $apo.sj$ and being touch with the basal margin of $pd.4$.

Legs. Tibia I markedly stouter than tibia II. Solenidion ω_1 on tarsus I gently curved, being thicker and longer than ω_2 , which is almost straight; ω_1 and ω_2 on tarsus II short, straight and resembling each other. Each claw not strongly curved; it is rather "sickle-shaped" than "hook".

Remarks. A total of five genera, *Tectocepheus* BERLESE, 1913, *Nodocepheus* HAMMER, 1958, *Tegeocranellus* BERLESE, 1913, *Tegezotes* BERLESE, 1913 and *Lamellocepheus* BALOGH, 1961, are considered at present to constitute the family Tectocephidae, though the inclusion of the last-mentioned genus in this family may be doubtful. They are all small in size (200–420 μ long), possessing well developed lamellae and clavate sensilli. The new genus *Nemacepheus* which is newly included in the family is unique in having long, glabrous, thread-like sensilli. The markedly toothed ventral margin of rostrum and

the characteristic dorsal bothridial plates, together with the form of sensilli, distinguishes the new genus from any other genera of the family. Eleven pairs of notogastral setae must be also peculiar of *Nemocepheus*, whereas 10 pairs in *Tectocepheus* as well as in *Tegeocranellus*, and 6 or 8 pairs in *Nodocepheus* are known. The genital plates have 6 pairs of setae as in *Tectocepheus* and *Tegeocranellus* (4 pairs in *Nodocepheus*), but their arrangement is different from those in the last-mentioned genera.

References

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要 約

青木淳一*：五葉山から得た土壌ダニの新属新種，デバクワガタダニについて

森林土壌の表層にはおびただしい数の無害のダニ類が生息し，落葉などの植物遺体の分解に関与している。このようなダニ類の存在は一般にはほとんど知られていないが，分類学上はダニ目の中の隠気門亜目（ササラダニ類）に属し，日本から約150種が知られている。今回，当館の上野俊一博士によって，岩手県東南部の五葉山で採取された土壌サンプルの中からも，多くの種類の土壌ダニが抽出されたが，その中に混じって注目すべきダニが1種7個体発見された。これはクワガタダニ科に属するものであることが判明したが，本科に含まれる既知属のどの属にも該当せず，新属を代表すべき新種であることが確かめられた。

新属新種発見の意義：土壌中に生活するダニ類の分類学的研究はきわめておくれているため，新種の発見はそれほど珍しいことではないが，新しい属の発見はかなり注目すべき事柄であろう。その価値をたとえば，昆虫類の中の比較的研究の進んだ群の中に新種が見出されたことに匹敵するものと思われる，1958年以来現在までに日本から発見された新属新種は9種にのぼる。しかし，これらの発見地はいずれも日本の中央部から南に寄った地域にあり，関東地方以北の土壌のダニ類はその種類組成がヨーロッパ大陸のものに近く，特異な種類の発見は期待されなかったものである。その意味から，今回東北日本の岩手県から新属が見出されたことはかなり興味深い。

形態的特徴：体長 0.3 mm あまりの小型のササラダニで，一見したところ顕著な特徴はなさそうであるが，その胸感毛 (Fig. 2) がひも形である点はクワガタダニ科のどの属にも見あたらない（他属では棍棒状に先がふくらむ）。また後体部背面に11対の毛があること（他属では 6, 8 または 10 対），吻の下面両縁に顕著な刃状の突起物 (Fig. 3) が並んでいること（和名中の“デバ”はこれにちなむ）なども本属を他属から区別する重要な特徴となる。

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